

# Component Documentation

A sophisticated Angular multi-step navigation component for creating step-by-step wizards, form flows, and progress workflows. Features animated progress indicators, interactive navigation, and flexible layout options for guiding users through complex processes.

## How to use

### Basic Usage

The most basic implementation with step labels and default horizontal orientation.

```
<aava-stepper
  [steps]="steps"
  [currentStep]="currentStep"
  orientation="horizontal"
  size="md"
  [iconColor]="'#fff'"
  [iconSize]='20' "
  (stepChange)="onStepChange($event) "
>
</aava-stepper>

---

steps = ['Step 1', 'Step 2', 'Step 3', 'Step 4', 'Step 5'];
currentStep = 0;

onStepChange(step: number): void {
  this.currentStep = step;
}
```

### Sizes

Three size options to accommodate different interface densities and visual hierarchies.

```

<aava-stepper
  [steps]="xsmallSteps"
  [currentStep]="xsmallCurrentStep"
  orientation="horizontal"
  size="xs"
  [iconColor]=" '#fff' "
  [iconSize]=" '16' "
  (stepChange)="onXsmallStepChange($event) "
>
</aava-stepper>

<aava-stepper
  [steps]="smallSteps"
  [currentStep]="smallCurrentStep"
  orientation="horizontal"
  size="sm"
  [iconColor]=" '#fff' "
  [iconSize]=" '16' "
  (stepChange)="onSmallStepChange($event) "
>
</aava-stepper>

<aava-stepper
  [steps]="mediumSteps"
  [currentStep]="mediumCurrentStep"
  orientation="horizontal"
  size="md"
  [iconColor]=" '#fff' "
  [iconSize]=" '20' "
  (stepChange)="onMediumStepChange($event) "
>
</aava-stepper>

<aava-stepper
  [steps]="largeSteps"
  [currentStep]="largeCurrentStep"
  orientation="horizontal"
  size="lg"
  [iconColor]=" '#fff' "
  [iconSize]=" '24' "
  (stepChange)="onLargeStepChange($event) "
>
</aava-stepper>

---

xsmallSteps = ['One', 'Two', 'Three', 'Four', 'Five'];
xsmallCurrentStep = 0;

smallSteps = ['One', 'Two', 'Three', 'Four', 'Five'];
smallCurrentStep = 0;

mediumSteps = ['Goal', 'Steps', 'Progress', 'Review', 'Finish'];
mediumCurrentStep = 0;

largeSteps = ['Research', 'Define', 'Ideate', 'Prototype', 'Test'];
largeCurrentStep = 0;

onXsmallStepChange(step: number): void {
  this.xsmallCurrentStep = step;

```

```

}

onSmallStepChange(step: number): void {
  this.smallCurrentStep = step;
}

onMediumStepChange(step: number): void {
  this.mediumCurrentStep = step;
}

onLargeStepChange(step: number): void {
  this.largeCurrentStep = step;
}

```

## Available Sizes

- xs : Extra small for minimal interfaces
- sm : Small for compact layouts
- md : Medium size for most use cases (default)
- lg : Large for prominent workflows and accessibility

## Icon Variants

Enhanced stepper with custom icons for each step, providing better visual context and user guidance.

```

<aava-stepper
  [steps]="checkoutSteps"
  [currentStep]="checkoutStep"
  [stepVariant]="icon"
  orientation="horizontal"
  size="md"
  [iconColor]="'#fff'"
  [iconSize]='16'
  (stepChange)="onCheckoutStepChange($event)"
></aava-stepper>

```

---

```

checkoutSteps: StepperStep[] = [
  { label: 'Login', iconName: 'user' },
  { label: 'Shipping', iconName: 'truck' },
  { label: 'Payment', iconName: 'credit-card' },
  { label: 'Confirmation', iconName: 'check-circle' },
];
checkoutStep = 0;

onCheckoutStepChange(step: number): void {
  this.checkoutStep = step;
}

```

## Icon Features

- Custom Step Icons : Replace numeric indicators with meaningful Lucide icons
- Contextual Guidance : Icons provide immediate visual context for each step
- State Awareness : Icons adapt to active, completed, and disabled states
- Consistent Sizing : Icons scale appropriately with stepper size variants

- Color Theming : Icons inherit stepper theme colors automatically
- Accessibility : Proper ARIA labels and descriptions for screen readers

## Orientation

Flexible layout options for different design requirements and content arrangements.

```
<aava-stepper
  [steps]="horizontalSteps"
  [currentStep]="horizontalCurrentStep"
  orientation="horizontal"
  size="md"
  [iconColor]=" '#fff' "
  [iconSize]=" '20' "
  (stepChange)="onHorizontalStepChange($event) "
>
</aava-stepper>

<aava-stepper
  [steps]="verticalSteps"
  [currentStep]="verticalCurrentStep"
  orientation="vertical"
  size="md"
  [iconColor]=" '#fff' "
  [iconSize]=" '20' "
  (stepChange)="onVerticalStepChange($event) "
>
</aava-stepper>

---

horizontalSteps = [
  'Personal Info',
  'Contact Details',
  'Preferences',
  'Review',
  'Submit',
];
horizontalCurrentStep = 0;

verticalSteps = [
  'Account Setup',
  'Profile Info',
  'Preferences',
  'Confirmation',
];
verticalCurrentStep = 0;

onHorizontalStepChange(step: number) {
  this.horizontalCurrentStep = step;
  console.log('Horizontal step changed to:', step + 1);
}

onVerticalStepChange(step: number) {
  this.verticalCurrentStep = step;
  console.log('Vertical step changed to:', step + 1);
}
```

## **Horizontal Orientation**

- Default layout : Steps arranged left to right
- Space efficient : Ideal for wide containers
- Progress visualization : Horizontal progress lines
- Label positioning : Labels positioned below step circles

## **Vertical Orientation**

- Alternative layout : Steps arranged top to bottom
- Sidebar friendly : Perfect for narrow containers and sidebars
- Vertical progress : Connecting lines flow downward
- Inline labels : Labels positioned next to step circles

## **Interactive Navigation**

Control user interaction and step accessibility with interactive navigation options.

```

<aava-stepper
    [steps]="interactiveSteps"
    [currentStep]="interactiveCurrentStep"
    orientation="horizontal"
    size="md"
    [iconColor]=" '#fff' "
    [iconSize]=" '20' "
    [interactive]="true"
    (stepChange)="onInteractiveStepChange($event)"
>
</aava-stepper>
</div>

<div class="demo-item">
  <h4>Non-Interactive Stepper (Display Only)</h4>
  <aava-stepper
    [steps]="nonInteractiveSteps"
    [currentStep]="nonInteractiveCurrentStep"
    orientation="horizontal"
    size="md"
    [iconColor]=" '#fff' "
    [iconSize]=" '20' "
    [interactive]="false"
  >
  </aava-stepper>

---

interactiveSteps = ['Step 1', 'Step 2', 'Step 3', 'Step 4', 'Step 5'];
interactiveCurrentStep = 0;

disabledSteps = ['Step 1', 'Step 2', 'Step 3', 'Step 4', 'Step 5'];
disabledCurrentStep = 0;

nonInteractiveSteps = ['Order Placed', 'Processing', 'Shipped', 'Delivered'];
nonInteractiveCurrentStep = 2;

onInteractiveStepChange(step: number) {
  this.interactiveCurrentStep = step;
  console.log('Interactive step changed to:', step + 1);
}

onDisabledStepChange(step: number) {
  this.disabledCurrentStep = step;
  console.log('Disabled step changed to:', step + 1);
}

```

## Interactive Features

- Click navigation : Jump to any accessible step by clicking
- Keyboard navigation : Enter and Space key support
- Disabled steps : Prevent navigation to specific steps
- Step validation : Control progression based on form validity
- Non-interactive mode : Display-only stepper for progress indication

## Event Handling

Comprehensive event system for tracking step changes and workflow completion.

```

<aava-stepper
  [steps]="eventSteps"
  [currentStep]="eventCurrentStep"
  orientation="horizontal"
  size="md"
  [iconColor]=" '#fff' "
  [iconSize]=" '20' "
  (stepChange)="onStepChange($event)"
>
</aava-stepper>
<p class="status-text">
  Current Step: {{ eventCurrentStep + 1 }} of {{ eventSteps.length }}
</p>
<div class="event-log">
  <h5>Event Log:</h5>
  <div class="log-entries">
    <div *ngFor="let log of eventLogs" class="log-entry">{{ log }}</div>
  </div>
</div>

<aava-stepper
  [steps]="completionSteps"
  [currentStep]="completionCurrentStep"
  orientation="horizontal"
  size="md"
  [iconColor]=" '#fff' "
  [iconSize]=" '20' "
  (stepChange)="onCompletionStepChange($event)"
>
</aava-stepper>
<p class="status-text">
  Current Step: {{ completionCurrentStep + 1 }} of {{ completionSteps.length }}
</p>
<div *ngIf="workflowCompleted" class="completion-message">
  Workflow completed! All steps finished.
</div>

---

eventSteps = ['Step 1', 'Step 2', 'Step 3', 'Step 4', 'Step 5'];
eventCurrentStep = 0;
eventLogs: string[] = [];

completionSteps = ['Setup', 'Configure', 'Test', 'Deploy', 'Complete'];
completionCurrentStep = 0;
workflowCompleted = false;

onStepChange(step: number) {
  this.eventCurrentStep = step;
  const timestamp = new Date().toLocaleTimeString();
  this.eventLogs.unshift(`[${timestamp}] Step changed to: ${step + 1}`);

  // Keep only last 10 logs
  if (this.eventLogs.length > 10) {
    this.eventLogs = this.eventLogs.slice(0, 10);
  }

  console.log('Step change event:', step + 1);
}
onCompletionStepChange(step: number) {

```



```

    this.completionCurrentStep = step;

    if (step === this.completionSteps.length - 1) {
        this.workflowCompleted = true;
        console.log('Workflow completed!');
    } else {
        this.workflowCompleted = false;
    }

    console.log('Completion step change:', step + 1);
}

```

## Available Events

- **stepChange** : Emitted when user navigates to a different step
- **stepperComplete** : Emitted when the final step is reached
- **Step validation** : Handle step transitions with custom validation logic

## Accessibility

Built-in accessibility features ensuring WCAG compliance and inclusive user experience.

```

<aava-stepper
  [steps]="steps"
  [currentStep]="currentStep"
  orientation="horizontal"
  size="md"
  [iconColor]=" '#fff' "
  [iconSize]=" '20' "
  (stepChange)="onStepChange($event)"
>
</aava-stepper>
---

steps = ['Step 1', 'Step 2', 'Step 3', 'Step 4', 'Step 5'];
currentStep = 0;
onStepChange(step: number) {
  this.currentStep = step;
  console.log('Step changed to:', step + 1);
}

```

## Accessibility Features

- **Keyboard navigation** : Tab, Enter, and Space key support
- **ARIA labels** : Descriptive labels for screen readers
- **Role attributes** : Proper button roles for interactive elements
- **Focus management** : Clear visual focus indicators
- **Step announcements** : Screen reader notifications for step changes
- **High contrast** : Support for high contrast mode preferences

## API Reference

### Inputs

Property	Type	Default	Description
steps	(string   StepperStep)[]	[]	Array of step labels or step objects to display
currentStep	number	0	Index of the currently active step (0-based)
orientation	'horizontal'   'vertical'	'horizontal'	Layout orientation of the stepper
showNavigation	boolean	true	Whether to show navigation elements
interactive	boolean	true	Whether steps are clickable for navigation
size	'xs'   'sm'   'md'   'lg'	'md'	Visual size of the stepper component
disabledSteps	number[]	[]	Array of step indices that should be disabled
iconColor	string	'#fff'	Color for the check mark icons in completed steps
iconSize	string	'20'	Size of the check mark icons
stepVariant	'default'   'icon'	'default'	Variant of step display (default numbers or icons)
showLabel	boolean	true	Whether to show step labels below circles
customStyles	Record	{}	Custom CSS styles to apply to the stepper

## Outputs

Event	Type	Description
stepChange	EventEmitter	Emitted when user navigates to a different step
stepperComplete	EventEmitter	Emitted when the workflow reaches completion

## Methods

Method	Parameters	Return Type	Description
goToStep(index: number)	index: number	void	Navigate to a specific step programmatically
isDisabled(index: number)	index: number	boolean	Check if a specific step is disabled

## CSS Custom Properties

Property	Default	Description
--stepper-wrapper-background	Dynamic	Background color for active/completed elements
--stepper-background	Dynamic	Background color for inactive elements
--stepper-line-completed-background	Dynamic	Background for completed progress lines
--step-label-font	Dynamic	Font size for step labels
--step-label-active-font-weight	Dynamic	Font weight for active/completed labels
--step-circle-text	Dynamic	Text color for step circles
--stepper-size-sm-circle-size	Dynamic	Circle size for small variant
--stepper-size-md-circle-size	Dynamic	Circle size for medium variant
--stepper-size-lg-circle-size	Dynamic	Circle size for large variant
--stepper-size-sm-font	Dynamic	Font size for small variant
--stepper-size-md-font	Dynamic	Font size for medium variant
--stepper-size-lg-font	Dynamic	Font size for large variant

## Accessibility Guidelines

### Keyboard Navigation

- Tab : Navigate to stepper and move between interactive elements
- Enter : Activate focused step (if interactive)
- Space : Activate focused step (if interactive)
- Arrow Keys : Alternative navigation between steps

### Screen Reader Support

- Use descriptive step labels that clearly indicate the purpose
- Provide context about the total number of steps

- Announce step changes and progress updates
- Include completion status in step descriptions
- Use appropriate heading levels for step content

## **Visual Design**

- Maintain sufficient color contrast (4.5:1 minimum) for all states
- Provide clear focus indicators on interactive elements
- Ensure step circles meet minimum touch target size (44px)
- Use consistent visual hierarchy across step states
- Support high contrast and reduced motion preferences

## **Best Practices**

### **Design Guidelines**

- Use clear, action-oriented step labels
- Keep step labels concise but descriptive
- Provide visual feedback for all step states
- Consider orientation based on layout constraints
- Group related steps logically in the workflow

### **Performance**

- Minimize step array modifications to prevent re-rendering
- Use OnPush change detection strategy for optimal performance
- Debounce rapid step changes if triggered programmatically
- Optimize animations for lower-end devices